

Research on Online Buying Behavior of Agricultural Products

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Abstract: In recent years, the development of the Internet is very rapid, the daily operation and product sales of enterprises are more and more inseparable from the Internet, and the growth of the online buying market is obvious. Some agricultural products began to join the network sales, which not only widened the marketing channels of agricultural products, but also enriched the agricultural products market, so that more consumers can obtain more and more affordable agricultural products. Through the analysis of 462 questionnaires, it is considered that consumers' satisfaction with the category richness of online agricultural products is very high, and the price ratio of online agricultural products is high, and the price advantage is the important reason why consumers buy agricultural products through the network. In the network sale, the characteristic agricultural product, the famous brand agricultural product is favored, but the freshness of the online buying agricultural product and the quality, safety and reliability of the online buying agricultural product are not recognized. Among the external objective factors that affect the behavior of online buying, the price of agricultural products and the quality of products themselves are still the most important influencing factors for consumers to buy agricultural products online, and the seller's credit, consumer security, network forums and so on also affect consumers' online buying decisions.

1. Background

According to the 45th China Internet Network Development Statistics Report released by the China Internet Network Information Center (CNNIC), at the end of March 2020, the number of Internet users in China was 904 million, the Internet penetration rate reached 64.5 percent, and the huge number of Internet users constituted China's booming consumer market and laid a solid user foundation for the development of the digital economy. The daily operation of Chinese enterprises is increasingly inseparable from the Internet. Chinese enterprises use Internet tools more and more widely to carry out communication, information acquisition and release, internal management and other aspects of work, which has laid a good foundation for the application of "Internet +" in

enterprises. Internet is no longer a single auxiliary tool, enterprises began to integrate the "Internet +" action plan into an important part of the enterprise strategic planning, which is highlighted in the attention of enterprises to Internet professionals, the development of online sales and procurement business, and the use of mobile terminals for enterprise marketing promotion.

E-commerce into rural areas, into small and medium-sized cities, into the community, online and offline integration interaction, cross-border e-commerce and other areas of industrial upgrading has been formed, and the network retail "platform economy" conforms to the development concept, so that the majority of businesses and consumers in the enterprise platform co-construction and sharing benefits. According to the data released by the National Bureau of Statistics, the national online retail sales volume for the whole of 2019 was 106.324 billion yuan, an increase of 16.5% over the previous year, and the number of e-commerce users continued to increase. Agricultural products are necessities of life, due to the impact of the epidemic, offline consumption is restricted, it is expected that in 2020, online sales of agricultural products retail sales will increase significantly. So, what factors affect consumers' online buying behavior? How can agricultural enterprises and agricultural producers use Internet commercial resources efficiently? How to improve the marketing effect of agricultural products network is an urgent problem to be understood and solved.

2. Literature Review

With the rapid popularity of the network, the proportion of enterprises using the Internet to carry out marketing and promotion activities has increased significantly. Traditional retailers began to build new channel systems to meet the changing market environment. Growing consumer demand has prompted traditional retailers to create new and diverse channels to serve customers in their distribution systems [1]. With the rapid development of the Internet, online store sales as a new way of circulation is gradually accepted by more and more consumers. Online buying, referred to as "online buying", is an enterprise consumer through the Internet to retrieve commodity information, and through electronic purchase orders issued buying requests, and then through online remittance, delivery of goods and other payment methods, manufacturers through logistics distribution door-to-door buying mode [2]. Shoppers can be divided into conservative shopper, rational shopper, hedonism shopper, spontaneous shopper and pioneer shopper [3]. Through online buying, consumers are not limited by time and place, which greatly increases the value of customer transfer and reduces the cost of buying. Especially for conservative and rational shoppers, they can obtain a large amount of commodity information to compare to make a more intelligent choice before the actual buying behavior occurs. Moreover, online payment is more secure than traditional cash payment. It saves time and effort from ordering goods and buying goods to the door. Compared with the traditional buying model, because online goods save a series of expenses such as renting stores, employees' wages and storage and storage, and enterprises can save a lot of marketing costs through artificial intelligence and other ways, the price is generally cheaper than the similar goods in general buying malls. For merchants, because online sales have no inventory pressure, low operating costs, and the scale of operation is not restricted by the site, B2C e-commerce transactions, as the main mode in e-commerce, have become one of the new and important consumption channels [4].

Traditional channels such as supermarkets and farmers' farms are the main places for consumers to buy fresh agricultural products. But with the rapid pace of urban life, it is difficult for office workers to have time to go to farmers' homes or supermarkets to buy agricultural products. Through the network, consumers can quickly browse the agricultural products information provided on the Internet, especially some agricultural producers can also make full use of the Internet of things technology to achieve agricultural fineness, fertilizer refinement, precision control and so on, from the source to solve the problem of agricultural products quality and safety and agricultural environmental pollution [5], so that urban consumers can buy high quality fresh agricultural products anytime and anywhere. With the agricultural products network ordering, logistics distribution, online payment and other conditions gradually mature, some agricultural enterprises and farmers began to set up online stores to sell agricultural products, consumers buy agricultural products through the network, has become a popular form of agricultural products buying.

3. Survey Processes and Sample Characteristics

According to the research needs, the researcher consulted a large number of documents collected on the key words such as "online buying", "online buying behavior", "online buying influencing factors", "online buying will" and so on. The common research angles and survey questions in the literature are synthesized and sorted out, forming an initial questionnaire composed of more than 70 questions. After the expert interview, team discussion and other processes, finally formed the final questionnaire used in the survey. The final questionnaire is divided into two parts, a total of 33 questions. The first part mainly includes online buying consumer personal information, online buying category, buying purpose, online buying decision factors and so on. Chapter two of the questionnaire contains 18 5 points likert scale, which mainly measures consumers' online buying attitude, feelings and so on. In order to ensure the rationality and scientific nature of this questionnaire and facilitate the understanding of the respondents, this questionnaire carried out the pre-test of the questionnaire before the formal distribution, and collated the feedback opinions, and revised the contents of the questions of the questionnaire again, and finally organized the actual investigation. This questionnaire distributed 620 questionnaires through the way of network and paper, and recovered 462 valid questionnaires, the effective rate was 74.5%. In the sample, 146 men and 316 women; 124 single, 338 family users; 110 people under the age of 24, 252 in the age of 25-40, 75 in the age of 41-50, and 25 over the age of 51. The income below RMB yuan 3000 is 125 people, 3000-6000 is 196 people, 6000 above is 141. The sample covers civil servants, business managers, self-employed, free workers, etc.

4. Data Analysis and Findings

4.1. Consumer Perception of Online Buying

Agricultural information development is rapid, some agricultural products began to join in the network sales, merchants also gradually realize the benefits of online buying. This new sales model not only broadens the marketing channels of agricultural products, but also enriches the market of agricultural products, so that more consumers can obtain more and more affordable agricultural products. In order to more clearly study the situation of consumers' online buying of agricultural

products, we began to investigate the characteristics of agricultural products. These attribute characteristics include category richness, brand awareness size, regional characteristics, whether to season, etc. The description statistical results of the overall characteristics of agricultural products buying online are shown in Table 1.

Table 1: Characteristics of agricultural products online buying.

	N	Average	Standard deviation
Quality, safety and reliability of agricultural products	462	3.08	.970
Variety of online buying products	462	3.52	.968
Famous brands of agricultural products	462	3.40	.963
Special products	462	3.45	.922
Non-local products	462	3.36	.977
Seasonal products	462	3.23	1.029
High freshness	462	3.06	.982
Low prices of agricultural products	462	3.39	.908

It can be seen that, (1) consumers' satisfaction with the category richness of online buying agricultural products is very high, and the price performance of online buying agricultural products is high. The data show that the average price of online buying commodities in China is about 70% of offline commodities, and the price advantage is one of the important reasons why consumers buy agricultural products through the network. (2) In the network sale, the characteristic agricultural product, the geographical indication protection product, the famous brand agricultural product is favored. The quality, reputation and other characteristics of the products protected by geographical indications are essentially dependent on the natural and human characteristics of the area. Famous agricultural products are agricultural products which are different from other agricultural products by specific natural conditions. "Characteristics" endow agricultural products with obvious differences in intrinsic quality, appearance shape or taste flavor, and long-term accumulation forms the "characteristic reputation" of the agricultural products [6]. (3) The freshness of agricultural products buying online and the quality, safety and reliability of agricultural products buying online are not well recognized, which may be due to the fresh and perishable properties of some agricultural products, the short preservation time, the harsh storage environment and conditions, and the high storage cost, which makes the consumption of this kind of agricultural products timely. The property of the product itself determines that it will produce a great loss in the process of storage and transportation, and the lack of industry standards of fresh agricultural products is not perfect, which leads to the problem of non-standardization of products. For the fresh agricultural products online buying, there is a big difference between the physical objects and the pictures used in the propaganda on the web page, and it is difficult to keep the same color and size [7].

4.2. Online Buying Experience, Frequency and Purpose

Compared with traditional consumption, online buying consumers can not have rich sensory stimuli such as touching goods, interacting face to face with salespeople and other consumers [8]. However, the sharing of consumer online buying experience can make up for these deficiencies. The sharing of online buying experience not only has real buying experience, but also includes some more specific information about goods, and the common perspective of consumers makes it easier for them to accept all this information about goods. Online buying experience sharing is a knowledge exchange process, that is, to share their own unique knowledge and experience gained in online buying to more people. According to the survey, online buying consumers have accumulated more online buying experience, more than 69.7% of consumers who contact online buying for more than 5 years, and only 5.4% of consumers who contact online buying for less than 2 years. The annual number of agricultural products buying online, less than 3 times accounted for 30.1%, 4-6 times accounted for 56.1%, more than 7 times accounted for 13.8%. These data show that online buying consumers have a high maturity. According to the survey, the purpose of online buying consumers was mainly shared by families, accounting for 50.8%, followed by their own using, accounting for 41.3%, while the proportion for children and the elderly was lower.

4.3. Main Influencing Factors of Consumer Online Buying of Agricultural Products

Objectively, the consumer's personality characteristics, income, buying time, the degree of network involvement, the price, quality, product freshness, hygiene status, buying environment, service quality, business reputation, logistics service level and so on will affect the consumer's buying choice. At the same time, consumer buying value perception, online buying experience and so on also determine the consumer online buying decision to a large extent. We focus on the external factors that affect the behavior of consumers online buying, as shown in Table 2.

Table 2: Influence factors of online buying.

Influence factors of online buying	Frequency	Percentage (%)
Quality	253	54.8
Price	282	61
Shop Type	52	11.3
Sellers' Reputation	238	51.5
Sellers' Service Attitude	105	22.7
Website (Shop) Promotion	94	20.3
Views of the surrounding	102	22.1
Consumer Online Comments	183	39.6
Logistics Service	74	16
Time cost	73	15.8
Buying Safety	85	18.4
Other	7	1.5

(1) Price. online buying consumers are more able to collect and compare commodity price information through the non-stop channel to seek lower commodity prices. "cheap price" has

become the main factor that affects consumers to make buying decisions. When consumers find that they can buy the same goods online at a lower price, there is a willingness to shop [9].

(2) Product quality. Product satisfaction is the core factor that affects the willingness of agricultural products to buy online at present, and the quality of agricultural products itself is still one of the decision factors that consumers pay great attention to.

(3) Seller's reputation. The popularity and trust of the website can improve the consumer's buying intention, and the good reputation can undoubtedly promote the consumer's trust in the online marketer. The security and trust of the transaction reduce the consumer's doubts about online buying, which will greatly increase the consumer's willingness to shop online.

(4) Online reviews. The accessibility of online reviews gives them advantages that other forms of word-of-mouth can not match. When purchasing goods, consumers will first consider the opinions of online reviews, which have become one of the most influential sources of information in the process of consumer buying decisions [10].

(5) Other factors. Online buying is also affected by logistics, finance, insurance, etc.

5. Conclusions and Recommendations

5.1. Key Findings

Consumers' satisfaction with the category richness of online buying agricultural products is very high, and the high price ratio and price advantage of online buying agricultural products are the important reasons for consumers to buy agricultural products through the network. The survey shows that characteristic agricultural products, well-known brand agricultural products are favored, but the freshness of online buying agricultural products and the quality, safety and reliability of online buying agricultural products are not highly recognized. Among the consumers who buy agricultural products online, it is mainly used by families, and the vast majority of consumers choose to use online payment methods. Mainstream buying websites are the primary choice for consumers, while local regional websites are not the mainstream channel for agricultural products network sales. In terms of the influencing factors of online buying, price is the most important influencing factor for consumers to purchase agricultural products online, and the quality of agricultural products itself is also one of the decision factors that consumers pay great attention to. Seller credit, consumer security and so on, affect the trust and choice of consumers to a certain seller, the impact of online forums, logistics, finance, insurance and other factors also affect the buying behavior of consumers to a certain extent.

5.2. Management Recommendations

(1) Vigorously developing network sales channels is a long-term solution for the future development of enterprises. This study shows that online buying has become one of the main ways of people's daily buying, and network channels have also become the main direction of modern enterprise channel reform. At the same time, with the further acceleration of urbanization, people's pace of life will be faster and faster, and urban traffic may be more crowded, which provides a favorable situational factor for the development of network channels. Therefore, it is urgent for

agricultural enterprises to actively construct effective network channels while perfecting traditional sales channels.

(2) Agricultural products network e-commerce should focus on improving the satisfaction and trust of online buying consumers. Agricultural product providers should maintain the richness of the categories of agricultural products that can be sold on the network, highlight the individuation of products, attract consumers' continuous attention, at the same time, we must strengthen the concept of cost and maintain the price advantage of agricultural products buying online. Most consumers are mature and rational consumers, network technology is only the means they use to obtain products or services, for fresh, perishable, short preservation time of agricultural products, must pay more attention to the timeliness of products.

(3) Agricultural enterprises should give full play to the advantages of network channels. Network channels can save consumers' money cost, time cost and physical cost to a certain extent. In particular, it should be noted that with the further regulation of the future e-commerce market environment, the difference between online commodity prices and traditional channel commodity prices will become smaller and smaller, and the role of other comparative advantages of network channels in addition to prices will become more and more important. Therefore, when carrying on the network marketing, the enterprise should use the development vision, pay more attention to explore and play the comparative advantage of the network channel.

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